

V.—*New Delias and other Butterflies from the East.*

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[Plates IV. &amp; V.]

WITH the exception of the first-named, the types of the species herein described are in the collection of Joicey.

1. *Delias egialea horracki*, subsp. n.

This form is distinguished from *egialea*, Crm., from Java, by the strong reduction of the bluish-grey scaling.

♂. Upperside of *fore wing* black; basal half, from middle of costa to anal angle, powdered with bluish-grey scaling, this scaling being dense towards extremity of cell and above submedian nervure; an indistinct bluish-grey point at extremity of cell; a submarginal series of indistinct bluish-grey points. *Hind wing* black; basal half bluish grey to lower submedian, beyond this yellow.

Underside of *fore wing* black; a large greyish-white patch towards extremity and a double white spot at end of cell; three elongate greyish-white patches from cellule 3 to inner margin, the one in 3 the smallest; a submarginal series of whitish dashes. *Hind wing* black; subbasal red band, cell and two spots above bright yellow; a discal series of seven bright yellow patches, of which the last, in the lower median interspace, is much the largest.

♀. Upperside of *fore wing* blackish brown; outer half of cell, spot at extremity of cell, and three elongate patches below cell orange-yellow; submarginal series of indistinct and dull yellowish-grey spots. *Hind wing* blackish brown; outer half of cell, two patches above and one below the cell orange-yellow; basal half of inner marginal area whitish grey; bluish-grey scaling on inner part of cellular orange patch and above cell.

Underside of *fore wing* similar to male, but cellular and discal white markings more extended yellow. *Hind wing* as in male, but subbasal red band slightly larger.

*Hab.* Bawean. 2 ♂♂, 1 ♀ in the collection of Made-moiselle de Horrack, of Paris.

2. *Delias enniana kapaura*, Roths., ♂.

(Pl. IV. fig. 1.)

*Delias enniana kapaura*, Rothschild, Ann. & Mag. Nat. Hist. ser. 8, vol. xv. p. 178. no. 21 (Jan. 1915) (Kapaur). ♀.

♂. Upperside very similar to *enniana*, Ob. *Hind wing*

with black marginal border to above vein 4 a little broader and much better defined.

Underside of *fore wing* with broader triangular costal spot. The lower of the three apical spots is yellow in its upper part. *Hind wing* with basal yellow area darker and only faintly tinging cellules 4-6. The marginal border is wider and its edge straighter than in *enniana*.

Type ♂ from River Uty, North Dutch New Guinea, Jan. 1910 (*C. & F. Pratt*); 1 ♂ from same locality at 1500 feet, March 1910; 1 ♂, Upper Setekwa River, South Dutch New Guinea, 2000-3000 feet, vii.-ix. 1910 (*A. S. Meek*); 1 ♂, 1 ♀, Mount Misresi, Arfak, 3000 feet, Jan. 1910 (*C. & F. Pratt*).

3. *Delias dice eceicei*, subsp. n.  
(Pl. IV. figs. 2 ♂, 3 ♀.)

Not having a true *dice*, Voll., before us, we compare this with *dorothea*, Mitis., the Waigeu form.

♂. Upperside of *fore wing* with edge of apical border outwardly curved at vein 4, the border narrower below vein 3 and only reaching submedian fold. *Hind-wing* border narrower, with a straighter edge, and not reaching vein 5.

Underside of *fore wing* with a narrow costal border and costal bar; spots in apical area larger and much as in *enniana*, Ob. *Hind wing* paler yellow than in *dorothea*, more thinly scaled in cellules 4-6, and leaving a narrow white edging to the marginal border above vein 4. Marginal border narrower, edge straighter, four small spots, the larger in 6.

♀. This specimen is probably from the Owen Stanley Range, but bears no locality, and we place it here provisionally.

Upperside as in *dorothea*, but hind wing with broader margin.

Underside of *fore wing* with broader costal bar almost united with distal border. Margin of hind wing much broader and with a nearly straight edge.

*Hab.* British New Guinea, Owen Stanley Range. (Type ♂, Ekeikei, 1500 feet, Jan.-Feb. 1903, *A. E. Pratt*; ♀, loc.?). In Tring Mus. a ♂ from Milne Bay.

4. *Delias dice samarai*, subsp. n.  
(Pl. IV. figs. 4 ♂, 5 ♀.)

♂. Differs from *eceicei* in the less defined edge of the apical black on the *fore wing*. On the *hind wing* the margin is wider and extends beyond vein 6.

Underside of *fore wing* with much broader costal bar than in *eceicei*, and at its lower edge almost touching the apical brown; the costal border is also broader. The apex is more broadly brown, extending two-thirds along vein 4 and reaching the submedian fold; the second apical spot is rounded, the third shows no trace of yellow, the fourth and fifth are linear. *Hind wing* not paler than in *dorothea*, the edge of the marginal border evenly defined, and a series of five distinct subterminal yellowish spots; these spots are absent in one specimen.

♀. Resembles *dorothea*. Upperside of *fore wing* with reduced costal white bar; marginal brown broader between vein 3 and inner margin; basal dark suffusion reaching origin of vein 2. *Hind wing* with much broader marginal brown than in *dorothea* and *eceicei*; basal dark suffusion extended to origin of veins 7 and 2.

Underside of *fore wing* with costal bar joined to the apical brown; third apical spot tinged with yellow. *Hind wing* with the nearly straight edge of distal margin reaching origin of vein 4.

*Hab.* E. and S.E. British New Guinea. (♂ ♀ types, Samarai; also 2 ♂♂ Samarai.) In Tring Mus. 2 ♂♂, 1 ♀, Sariba Island.

5. *Delias albertisi neyi*, Ribbe, ♀.  
(Pl. IV. fig. 6.)

*Delias neyi*, Ribbe, Insekten-Börse, xvii. p. 308 (1900) (Aroa River).  
♂.

♀. Upperside of *fore wing* with reduced white area, which does not extend into cell. *Hind wing* with broader black margin.

Underside as in ♂.

Length of fore wing 34 mm.

*Hab.* British New Guinea, probably Yule Island.

The specimen bears the label. "Amboine," which is certainly erroneous. There are two ♂♂ in the collection from Yule Island, but these do not differ from mainland specimens. In our series of five ♂♂ the discal spot of the hind wing is variable in size, and in one specimen from Yule Island it is absent.

6. *Eribea eulamippus le moulti*, subsp. n.  
(Pl. V. fig. 1.)

This form is intermediate between *nigrobasalis*, Lathy, *Ann. & Mag. N. Hist.* Ser. 8. Vol. xviii. 5

from Siam, and *rothschildi*, Leech, from China. It more resembles the former.

♂. Body as in *rothschildi*.

Upperside of *fore wing* with cell all black or bearing a pale streak. The spot at end of cell may or may not be joined to the patch in 3. The basal black is not so extended as in typical *nigrobasalis*, but is more so than in the specimen of that form from the Shan States figured in Nov. Zool. v. pl. xvi. fig. 2. The two inner submarginal spots in cellules 1*b*, 1*c* are either absent or the spot in 1*c* only is present and the spot in 1*b* represented by a bluish lunule. The subterminal spots are larger than in the allied forms, especially so in proportion is the spot in 7; there is a minute dot in 8 at the apex. *Hind wing* with some dark scaling at extreme base. The black marginal band is as broad as in *rothschildi* and with an evenly defined edge. The subterminal spots are a little smaller than in this form and the anal lobe is margined with yellow to half or more than half its width.

Underside more resembling typical *eudamippus* than *rothschildi*. On the hind wing the blue edging of the lunules is only faintly marked, the subterminal spots are smaller, and the silvery band is broken on the anal lobe by the extended yellow.

*Hab.* Vrianosong, Tibet. 6 ♂♂ sent us by Monsieur Le Moul, of Paris.

#### 7. *Acca venilia jobina*, subsp. n.

(Pl. V. figs. 2 ♂, 3 ♀.)

♂ ♀. Approaches *pseudovenilia*, Fruh., from Dutch New Guinea, but the band is broader. On the *fore wing* the spot in the lower median space is smaller than the others, and the band is heavily margined with blue distally; the subapical spots are larger and closer together than in *pseudovenilia*. On the *hind wing* the band narrows anally and is heavily margined with blue distally.

1 ♂, 3 ♀♀ from Jobi.

A single ♀ from the island of Mioswar in Geelvink Bay may represent another race. It is much larger than other forms, the fore wing measuring 31 mm. The band is very broad, the spot in 2 on the fore wing measures 7 mm. and on the hind wing the band is 6 mm. wide at its middle. It is margined with violet-blue, though less heavily than in *jobina*. The subapical spots are very large.

8. *Papilio horishanus*, Mats. (Pl. V. fig. 4.)

We take this opportunity of figuring this very interesting *Papilio*. The specimen figured was taken at Gokansan, Formosa, in August 1914.

This distinct species shows its relationship to *kuehni*, Hour., from Celebes, in the delicate carmine patch on the hind wing below, this patch in *kuehni* being small and restricted to the discal area.

EXPLANATION OF THE PLATES.

PLATE IV.

- Fig. 1. *Delias enniana kapaura*, Roths., ♂.  
 Fig. 2. — *dice eccicci*, ♂.  
 Fig. 3. — — — —, ♀.  
 Fig. 4. — — — — *samarai*, ♂.  
 Fig. 5. — — — —, ♀.  
 Fig. 6. — *albertisi neyi*, Ribbe, ♀.

PLATE V.

- Fig. 1. *Eribœa eudamippus le moulti*, ♂.  
 Fig. 2. *Acca venilia jobina*, ♂.  
 Fig. 3. — — — —, ♀.  
 Fig. 4. *Papilio horishanus*, Mats.

VI.—On the Rats usually included in the Genus *Arvicanthis*.  
 By OLDFIELD THOMAS.

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THE variation in colour-pattern among the rats commonly included in the genus *Arvicanthis* is so great that one would expect that some generic or subgeneric division of them would prove ultimately advisable. Some species are without lines on the back, some have one, others four, and others again a larger number of stripes which may or may not be broken up into spots.

Of names already existing within the group the earliest is *Rattus*, Donovan, but, as is shown in a succeeding paper, that is antedated by earlier writers for other animals. Then follow *Arvicanthis*, Lesson, and *Isomys*, Sundevall, both based on the Nile rat, *A. niloticus*, and finally *Lemniscomys*, Trouessart, founded on the striped species, *L. barbarus* being taken as typical. Recently Mr. Heller\* has recog-

\* *Smiths. Misc. Coll.* lix, no. 16, p. 12 (1912).